

# The Roundtable on Sustainable Biofuels

*Ensuring that biofuels deliver on their promise of sustainability*



# *The Roundtable on Sustainable Biofuels*

We are an international multi-stakeholder initiative developing principles and criteria for sustainable biofuels production that will be:

- **Simple, accessible** and implemented worldwide
- **Generic** to all crops
- **Adaptable** to new information
- **Efficient and cheap** to measure
- **In line with WTO rules**  
(use ISEAL code)



## *How is the RSB organized?*

- One **Steering Board** composed of international stakeholders from WWF, UNEP, Swiss and Dutch governments, US and Japanese universities, Shell, BP, Toyota, TERI India, Mali Folkecenter, Petrobras, and others.
- One **secretariat** based at EPFL.
- Four **Working Groups (GHG, Environment, Social, and Implementation)** + smaller **Expert Advisory Groups** to make recommendations to the Steering Board. 270 participants from international organisations, NGOs, private sector and academic institutions from 38 countries.
- **Global stakeholder** feedback at every step (blogs, teleconferences, wiki technology). Three **regional meetings** held already in Brazil, South Africa, China; India scheduled for June 12-13th. New partnership with Inter-American Development Bank.
- Innovative **transparent standard-setting using [www.BioenergyWiki.net](http://www.BioenergyWiki.net)**, to share background information and share comments with other participants.

## *Draft RSB Standard*

	Direct	Indirect
<b>National Law</b> (esp. re. land, labor, water rights)	✓	
<b>Community Consultation</b> (esp. to determine land rights, social & environmental impact, idle land, resolve grievances)	✓	
<b>Social</b> – biofuels should benefit rural communities and workers	✓	
should not contribute to food insecurity	✓	✓
<b>GHG</b> (positive balance over lifecycle)	✓	✓
<b>Environmental</b> – conserve and protect soil, water, air	✓	
conserve and protect high conservation values	✓	✓
<b>Technology</b> –technologies (esp. Biotech) should be used responsibly and transparently	✓	

# *'Better' biofuels*

- **Minimum social and environmental criteria for sustainable agriculture**
  - Low-cost verification system, accessible to smallholders
  - Global multi-stakeholder governance
- **Incent 'better' biofuels, i.e. those with:**
  - Good GHG reduction potential, including sequestering carbon in soil
  - Rural development potential
- **Reduce pressure to use new lands:**
  - Encourage use of degraded lands (but these need identification)
  - Use waste materials as feedstocks
  - Improve yields on existing lands (whilst minimizing environmental impacts)

## Roundtable on Sustainable Biofuels - Draft Scorecard Concept

Overall Energy and Greenhouse Gas Efficiency	Conservation of Natural Resources				Social Concerns		
Total score for product life-cycle (well-to-wheel)	biodiversity	soil health	air quality	water use	Food security	Working conditions	
Considerable reduction of ecol./ social footprint	Low GHG emissions, maximize carbon sequestration (e.g. low-till)	Biodiversity corridors	Restore degraded land	No sig. impact on air quality on farm or at processing facility	No sig. impact on local water quality or quantity	Use of degraded or idle land	Best-practice wages and working conditions
Small or no reduction on ecol./ social footprint	10-90% GHG emissions as compared to fossil fuel	Buffer zones	erosion protection	Moderate impact on air quality	Moderate impact on local water quality, quantity		
No or negative impact on ecol./ social footprint	High N2O emissions from fertilizers, conversion of high carbon-stock land	Deforestation, habitat encroachmt.			Water pollution, significant reduction in water availability		Hazardous or illegal working conditions

## *Structure of GHG WG*

The Working Group is led by two **Co-chairs**:

➤ Dr. Bruce Dale (Michigan State University)

➤ Dr. Stephan Krinke (Volkswagen)

and a **coordinator**:

Dr. Tourane Corbière (EPFL)

Georgios Sarantakos from EPFL will be supporting Tourane and the group with background research.

The members of the **Expert Advisory Group** are:

Dr. Jean-François Larive (Concawe)

Dr. Harro von Blottnitz (University of Cape Town)

Dr. Edgard Gnansounou (EPFL)

Dr. Guido Reinhardt (IFEU, Germany)

Dr. Hisashi Ishitani (Keio University)

Dr. Isaias Macedo (UNICAMP, Brazil)

Dr. Jeremy Woods (Imperial College London)

Dr. Michael Wang (Argonne National Labs, USA)

Dr. Rainer Zah (EMPA, Switzerland)

Dr. Shoba Veeraraghavan (Shell)

## *Principal No. 3 : Climate Change and GHG*

**3. Biofuels shall contribute to net GHG emission reduction as compared to fossil fuels, in order to stabilize the climate.**

*Draft guidance/ criteria:*

Emissions shall be estimated via a consistent approach to lifecycle assessment, with system boundaries from “well to tank”, including carbon embedded in the fuel but excluding vehicle technology . This shall include direct and indirect GHG emissions, for instance from fossil energy used in growing, transporting and processing a biofuel, as well as the carbon embedded in the biofuel. It shall also include GHG emissions resulting from land use changes as land is converted to biofuel crop production, or as other production is displaced.



# *The GHG Working Group*

- We are not going to create a new LCA tool, or pick an existing LCA tool. Rather we will agree on a preferred methodology, especially :
  - key factors to include,
  - co-product allocation, and
  - accounting for GHG emissions from direct and indirect land use change.
  
- This preferred methodology will then be the basis for guidelines for national/other LCA tools that could be used to measure biofuels' performance.
  
- Use teleconferences, online discussions, and in-person expert meetings over the next year to come to consensus on a methodology and approach.
  
- Use/recognize other scientific consensus (e.g. IPCC)

## *Guidelines for LCA tool*

➤ G8 Global Bioenergy Partnership (GBEP) Methodological Framework for countries/institutions to use when developing GHG methodologies for biofuels is adopted by our GHG WG

➤ The GHG- WG approved the use of :

1) as functional unit: CO<sub>2</sub> equivalent (in kg) per Mega Joule [kgCO<sub>2</sub>equ/MJ]  
including the CO<sub>2</sub> equivalent GHG emissions from the eventual fuel combustion;

2) as system boundaries: from well to tank (WtT).

## *Key factors to include in the LCA*

- GHG WG has decided to require measuring at least CO<sub>2</sub>, N<sub>2</sub>O and CH<sub>4</sub>.
- For waste, the focus should be only on processing, transport, and use.
- Quantifying direct land use change is required, indirect land use change is being discussed. Should be tackled at a meta-level/qualitatively.
- Default values will be prepared by the Secretariat for the quantification of the different biofuel chains (On-farm/forest elements, Farm/Forest to Processing Plant, Processing Energy, Transport). Nitrous oxide needs particular detail.
- Global fossil reference will be used, based on IEA projections.

# *By/Co-Product Treatment*

- The RSB recommendation is compatible with ISO:
  - Substitution is the preferred approach
  - Allocation by energy content may be used for energy co-products
  - Allocation by market value should be used if substitution is not possible
  
- The secretariat will prepare good guidelines for how substitution should be used – otherwise it's too open for choices that might prevent compatibility of results.

# *Timeline*

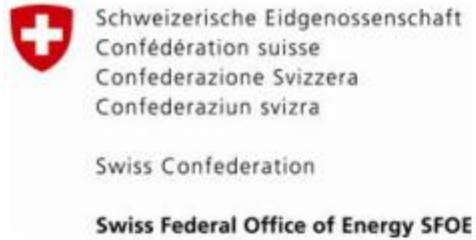
- Draft principles and criteria to be approved by Steering Board in June
- Next steps regarding governance (e.g. regional groupings, national interpretations, formalize decision-making, membership requirements) to be discussed in June



## After June:

- Coordinate pilot testing of draft standards in real supply chains
- Help private and public sector integrate standards into purchasing (e.g. Inter-American Dev. Bank)
- Encourage/foster crop-specific better practice definitions (e.g. jatropha)
- Develop generic indicators, benchmark against existing standards
- Collaborate with other partners to measure & mitigate indirect effects

# E25 Supporters



**Roundtable on Sustainable Biofuels**

